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TECHNICAL NOTES

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STN PUB ALASKA FOREST RESEARCH CENTER

U. S DEPARTMENT OF AGRICULTURE, FOREST SERVICE

No. 25

JUNEAU, ALASKA

Alder Control on Cutover Areas

Alder may seriously retard establishment of desirable tree species under certain conditions in Southeast Alaska. It is particularly troublesome on deep, well-drained soils along skid trails and at landings where heavy disturbance has exposed bare mineral soil. Since such areas may make up 10-20 percent of a cutover area, a reduction or retarding of stocking can reduce yields of timber over a rotation considerably on some of the highest producing sites. While areas of alder are not extensive at present, the problem is of concern to the forest manager.

In 1954 the Alaska Forest Research Center, in cooperation with the timber management staff of the Southern Division, Tongass National Forest, conducted a test designed to control alder. The main objective was to attempt to prevent establishment of alder on a deep alluvial flat logged in 1954 by poisoning all alder seed trees on or adjacent to the area.

The stream bottom portion of the cutover area was approximately 35 acres in extent. Large alder trees were scattered over the entire area but most of them were along stream banks. Alder larger than 4 to 6 inches in diameter were poisoned by chopping cups at 8-inch intervals around the root collars and placing a teaspoon of ammonium sulfamate crystals in the cups. Smaller trees were felled and the stump poisoned. Approximately 652 stems on the 35 acre area were treated at a cost of approximately $2.14 per acre or 12 cents per stem treated.

The area was treated June 22, at which time the green alder cones were well-developed and full sized. The leaves of the poisoned trees turned black within a month. At the end of two months the cambium was dead on practically all trees. No viable seeds were produced by treated trees. The treatment was apparently effective in preventing large amounts of alder seed from being released on the cutover area and should reduce amount of alder becoming established. While alder seed may fly considerable distances, transects of cutover areas show heaviest concentrations of alder seedlings near a seed source.

May 1955

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